



UNITED STATES PATENT AND TRADEMARK OFFICE

11/11/05

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,459	11/05/2003	Hsin-Pang Lu	4425-325	9387
7590	09/21/2005			EXAMINER
LOWE HAUPTMAN GILMAN & BERNER, LLP Suite 310 1700 Diagonal Road Alexandria, VA 22314			TO, TUYEN P	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/700,459	LU ET AL.	
	Examiner Tuyen To	Art Unit 2825	TT

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 November 2003 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/05/2003</u> .	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

This is a response to the communication filed on 11/05/2003. Claims 1-20 are pending.

Specification

1. The disclosure is objected to because of the following informalities: on page 8, line 14, the element 200 appears to an error because it is not shown in the drawing (fig. 2B). Also, on page 9, the second paragraph does not refer to any figure.

Appropriate correction is required.

Claim Objections

2. **Claims 5-10 and 12-19** are objected to because of the following informalities:

Claim 6 is a dependent claim of itself (in claim 6, line 1; "The method according to claim 6").

Claims 7, 9-10 are dependent claims of the objected claim 6.

Claims 12-15 are dependent claims of the objected dependent claim 10.

Claims 5-9 and 15-19 are objected to because "bulk" is not clearly defined in the specification and the claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make

and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claim 1-20** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 and 11 are rejected because the limitations (“checked set”, “warning set”, and the step of “checking said basic set according to said rules set, wherein all the checked basic units in said basic set are included in a checked set”) of claims 1 and 11 were not clearly and fully described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The limitations of claims 1 and 11 were not clearly and fully described in the specification.

Examiner has not followed: the process of the checking rules and distinguishing a warning set. (described in the first and second paragraphs on page 7 in the specification).

(claim 1 and similarly recited claim 11)

“scanning all basic units in a database, wherein all the scanned basic units in said database are included in a basic set”.

“checking said basic set according to said rules set, wherein all the checked basic units in said basic set are included in a checked set ; and”

“distinguishing a warning set in said basic set from said checked set”

(Specification on page 6, lines 18-20)

“Firstly, step 210 scans all basic units in a database, wherein all scanned basic units in the database are comprised in a basic set.”

(Specification on page 7, lines 2-3)

“Then checking rules of a rules set is used to check the database in step 230, and all basic units checked by said rules set are comprised in a checked set.”

(Specification on page 7, lines 12-13)

“the warning set comprises those unchecked basic units, which are left behind by the rules set.”

Examiner has not been sure whether the rule checking step is checking the database (as described in the specification) or checking the basic set (as recited in the claims). If the basic set is checked, are the entire basic units checked by design rules of the rule set?

Are all rules in the rule set applied in the process before outputting the warning set?

What checked units are included in the checked set? Are they included violated or in-violated ones or included both? If they are included both violated and in-violated ones as recited in the claim 4 (“said checked set comprises said basic units that are violated and inviolate according to said rules set”) and if the entire basic units in the basic set are scanned and checked, will the number of the checked units in the checked set be the same as the number of the scanned units (basic units) in the basic set. If these numbers are equal then according to the description of a warning set as described in the specification, (“Comparing said basic set and checked set could separate out the warning set ” or “the warning set comprises those unchecked basic units”, page 7, lines 11-13), will the result of a warning set be empty? If it is empty, how can an empty set be used to refine the design rules?

4. **Claims 2-10 and 12-20** are rejected because they depend on claim 1 and claim 11.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Malhotra** (US Parent Pub. No. 2003/0061583).

Referring to claim1 and similarly recited claim 11, Malhotra discloses a method for dimension rule checking, comprising:

scanning all basic units in a database, wherein all the scanned basic units in said database are included in a basic set (*Fig. 1; page 1 [0005] ; Fig. 7b, page 4 [0061]*);
checking said basic set according to said rules set, wherein all the checked basic units in said basic set are included in a checked set (*Fig. 1; page 1 [0005], [0006] ; Fig. 7b, page 4 [0061] to [00063]*);

distinguishing a warning set in said basic set from said checked set (*Fig. 7b; page 4 [0061] to [00063]; in the steps disclosed by Malhotra in Fig. 7b, Malhotra teaches a step of checking polygons by all the design rules irrespective of the detection of a rule violation by keeping track of a set of checked polygon ("checked set"), to thereby distinguishing a unchecked set of polygon ("warning set") from the selected set ("basic set") to continue the checking process (in p[0063])*) ; and

outputting said warning set (*Malhotra discloses the result of the unchecked set of polygons is used (resulting "output") to continue the process, Fig. 7b, p[0063]*).

Referring to claim 2 and similarly recited claim 12, Malhotra discloses the method according to claim 1, wherein said basic unit is a line segment (*Fig. 6d, page 4[0054]*).

Referring to claim 3 and similarly recited claim 13, The method according to claim 1, wherein said basic unit is an edge of a polygon (*Fig. 3; page 3[0046]; page 5[0064]*).

Referring to claim 4 and similarly recited claim 14, Malhotra discloses the method according to claim 1, wherein said rules set comprises a plurality of spacing checking rules (*page 1[0003]; page 4[0056]*), and said checked set comprises said basic units that are violated and inviolate according to said rules set (*Fig. 7b, p[0063]*).

Referring to claim 5 and similarly recited claim 15, Malhotra discloses the method according to claim 1, further comprising scanning all basic units related to a bulk in said database, wherein all scanned basic units related to said bulk are comprised in a bulk set (*Malhotra; Fig. 1; page 1 [0005]; Fig. 7b, page 4 [0061]; Lampaer et al. (US Patent No. 6839887) teaches that "bulk" is a substrate that contacts for each NMOS transistor in a*

differential pair layout (Fig. 2; Fig. 5-6; col. 6, lines 9-34; col. 8, lines 29-45; col. 12, lines 37-59)).

Referring to claim 6 and similarly recited claim 16, Malhotra discloses the method according to claim 6, wherein said checked basic units in said bulk set are directly faced said bulk (Fig. 3; page 3[0046] and [0038]).

Referring to claim 7 and similarly recited claim 17, Malhotra discloses the method according to claim 6, wherein said checked basic units in said bulk set are the edges of said bulk (Fig. 3; page 3[0038] and [0046]; Fig. 5b; page 3[0051]).

Referring to claim 8 and similarly recited claim 18, Malhotra discloses the method according to claim 5, further comprising checking said bulk by said rules set (page 4[0056]), wherein all checked basic units in said bulk set are comprised in a checked bulk set (Fig. 3; page 3[0038] and [0046]; Fig. 5b; page 3[0051]).

Referring to claim 9 and similarly recited claim 19, Malhotra discloses the method according to claim 6, wherein said basic units that are also comprised in said checked bulk set are further excluded from said warning set (page 5[0063]).

Referring to claim 10 and similarly recited claim 20, Malhotra discloses the method according to claim 6, further comprising refining said rules set before outputting said warning set, wherein said rules set is refined according to said warning set (page 5[0062]).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen To whose telephone number is (571) 272-8319. The examiner can normally be reached on 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuyen To
Patent Examiner
AU 2825

Tuyen To

Vuthe Siek
VUTHE SIEK
PRIMARY EXAMINER